

NAME \_\_\_\_\_

DATE \_\_\_\_\_

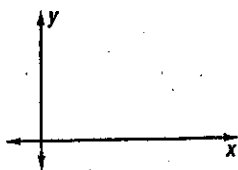
PERIOD \_\_\_\_\_

4-7

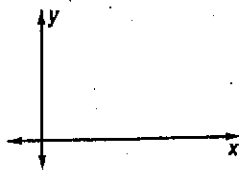
**Skills Practice****Triangles and Coordinate Proof**

Position and label each triangle on the coordinate plane.

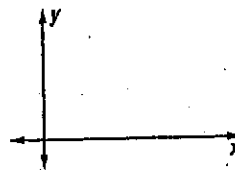
1. right
- $\triangle FGH$
- with legs
- $a$
- units and
- $b$
- units



2. isosceles
- $\triangle KLP$
- with base
- $\overline{KP}$
- $6b$
- units long

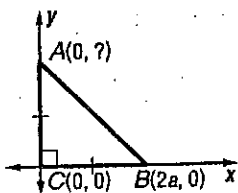


3. isosceles
- $\triangle AND$
- with base
- $\overline{AD}$
- $5a$
- long

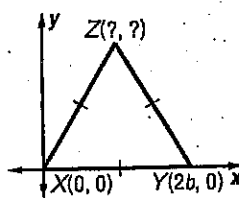


Find the missing coordinates of each triangle.

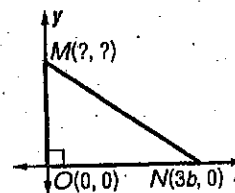
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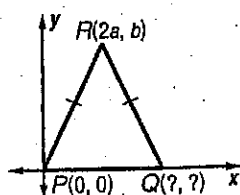
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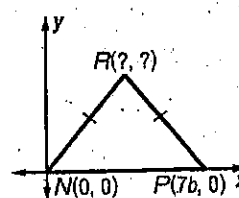
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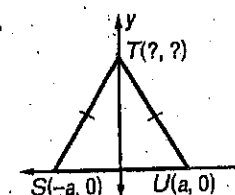
7.



8.

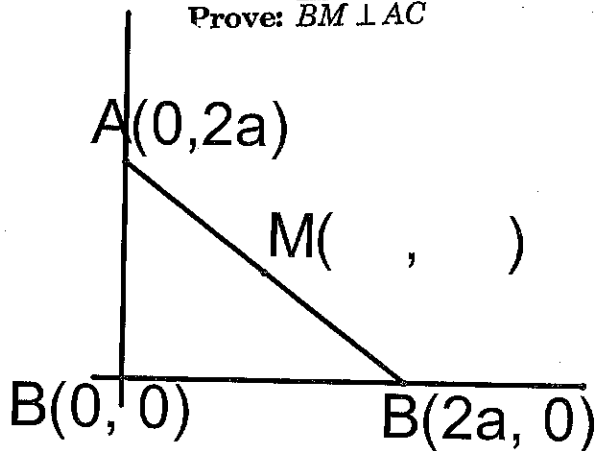


9.



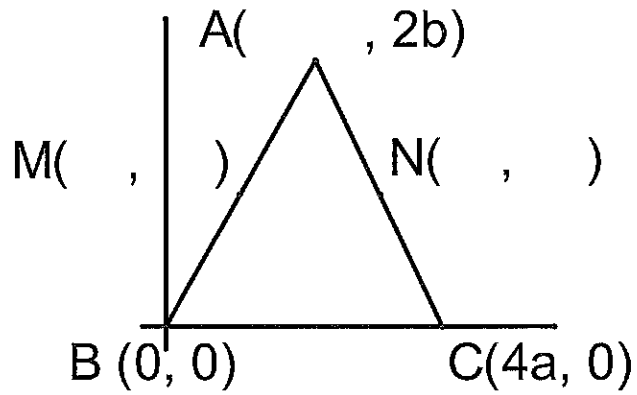
10. Write a coordinate proof to prove that in an isosceles right triangle, the segment from the vertex of the right angle to the midpoint of the hypotenuse is perpendicular to the hypotenuse.

**Given:** isosceles right  $\triangle ABC$  with  $\angle ABC$  the right angle and  $M$  the midpoint of  $\overline{AC}$   
**Prove:**  $\overline{BM} \perp \overline{AC}$



Fill in the diagram and then prove:

11. Given:  $\triangle ABC$  is isosceles (A is the vertex angle)  
M is the midpoint of  $\overline{AB}$  and N is the midpoint of  $\overline{AC}$ .  
Prove:  $MN = \frac{1}{2} BC$



12. Given: Trapezoid ABCD. M and N are the midpoints of the legs.  
Prove:  $MN = \frac{1}{2} (AB + CD)$

